

The male aids in incubation.

Earliest positive date for young in nest, May 13.

For at least two to three weeks before the commencement of nest building the birds spend the greater part of clear days away from the boxes, returning to them towards sunset. During rainy or extra cold days they do not so generally depart from the boxes at such times.

All the birds forsake the boxes two to three weeks after the young first fly. Prior thereto they may be absent during the greater part of the day but usually return to the boxes at night.

. Latest dates when seen September 20 to October 2 for different years.

TWENTY-FOUR HOURS IN A BLACK SKIMMER COLONY

BY E. R. BALES, M.D.

A day and a night spent in the midst of a densely populated sea bird colony is an experience never to be forgotten. Such was my experience on June 23, 1917. The colony was one of the Black Skimmer (*Rhynchops nigra*), and was located on a small island about fifteen miles off the Virginia coast.

The island is composed entirely of fine sand, and is barely above high tide, in fact, it is so slightly elevated that high tides in 1916 swept over the island drowning all the young birds with the exception of a few which took refuge on several slight elevations. A thin growth of salt water grass covers these elevated portions, but the rest of the island is destitute of vegetation.

The colony, a conservative estimate of which, would number the breeding birds at 4000 pairs, is about one mile long and several hundred yards wide. It is like a city, being more thickly populated at some parts than at others; at one place, without moving, 26 nests could be seen, at another place 14, and at another 10. The similarity to a great city is further carried out by the small detached

hamlets or villages of 25 or 30 nests located some distance from the main colony.

As is well known, no nest worthy of the name is made; the bird makes a depression in the sand by turning round and round, and in the slight hollow thus formed, the eggs are laid. Four eggs comprise a full set, although three nests were found containing five eggs and quite a number containing only three.

It is probable that the sets of three (while some of them were highly incubated) were incomplete sets.

On windy days, if the bird stays away from the nest for any length of time, the nest is soon filled level full of the fine shifting sand and the eggs are completely covered. This may account for the smaller sets.

One set was found containing a dwarf egg and three sets containing albino or partially albinistic eggs.

Quite a difference in size was noted; the longest egg measured 2.02 and the shortest 1.55. In the short diameter, the largest measured 1.48 and the smallest 1.14. In a series of 179 eggs measured, the average long diameter is 1.74 and the short diameter 1.28. The dwarf egg measures 1.09x.83.

Assisted by my son, I set up the blind where five nests could be seen, each one of them in a different direction and none of them more than ten feet from the blind. Four of the birds did not return to their nests, but the fifth one did; she was very nervous and during the day did not remain at the nest for any great length of time. As she settled upon her eggs, she would utter a sort of liquid cuddling sound, somewhat similar to the clucking sound made by a hen as she broods her chicks. Each time as she settled upon the eggs, she pressed her sharp bill upon the edge of the nest. This action accounts for the sharp lines in the sand frequently seen radiating in all directions from the nests. As the skimmer invariably faces the wind, either while brooding or while standing upon the sand, in time these marks point in almost every direction.

The four birds that did not return to their nests used every means in their power to lure the strange object from their eggs. They would alight some distance from the blind and then toddle away on wobbly legs, with wings outspread; push themselves along by sliding upon their breasts; stagger away with outspread wings beating upon the sand; sit at a safe distance opening and closing their bills, but not making any sound as though they were swearing at us under their breath or they would fly past the blind in small companies screaming, "Ow, ow, ow," as though some one was beating them and they were crying out with each stroke of the whip. When larger companies charged past, the sound was almost deafening and the combined "ows" sounded like a pack of hounds baying.

There was always a large number of birds not on their nests and they would line up upon the sand at a safe distance, always facing the wind; as their fright became less, they would move up closer to the blind until some sudden panic would send them all sailing away. This performance was repeated again and again. They presented a strange sight all facing the same way and looked for all the world like a company of undertakers in their somber black and white suits.

When approaching the nest, the Skimmer does not alight directly upon it, but alights a short distance away and toddles up on its absurdly small "Chinese lady" feet. The bird then enters the nest, cuddles down upon the eggs, presses the bill into the rim and after it is settled, utters the cuddling note.

While we were in the blind, another bird some distance away, but outside our line of vision, would frequently enter and leave its nest and we could hear it utter its cuddling note. Its voice was higher in pitch than the one we were observing and photographing, and we could always tell without looking which bird was entering its nest.

The skimmers were coming and going almost all of the night and the cuddling note could be heard from all

sides. This contrasted strongly with a nearby colony of Common Terns that became quiet as soon as darkness fell.

The young when hatched are so near the color of the sand that they are almost invisible and when walking about in a colony one must exercise great care to avoid stepping upon them. Their instinct tells them that their safety lies in remaining motionless, and they will lie quietly upon the sand with neck far outstretched and not move unless disturbed, when they scuttle away with long slender wings outstretched and with surprising speed.

When first hatched, both the upper and lower bills are of the same length, but by the time they are beginning to feather out, the lower bill begins to get longer, and by the time the bird is flying, it is much the longer.

Some authorities maintain that the lower bill does not become longer than the upper until the birds are able to fly. This we found to be untrue.

As with most birds, the Black Skimmer becomes much bolder when there are young birds, and charges upon the intruder in immense flocks, with open mouths and deafening cries, but the flock swings to one side when close to the object of attack, and I have never heard of any one being struck.

The food seems to consist mainly of small minnows and killifishes. None of these are obtainable nearer than at least two miles from the island, and small parties may be seen far from home, industriously skimming the water, searching for food, and are often encountered flying toward the island with small minnows carried crosswise in their bills. They have the habit of skimming close to the surface of the sand or of mud in the same manner as when over the water.

The local names of "Cutwater" and "Shearwater" of course apply to their habit of skimming, but I am at a loss to account for the name of "Flood Gull."

While observing and photographing from a blind in the midst of a Black Skimmer colony, June, 1917, I could

not help noticing the actions of the birds in a near-by colony of Common Terns, and was surprised at the vocabulary of this Tern.

In addition to the common cry of "Te-ahr-r-r-r-r," or as sometimes written, "Te-ah-a-a-a-a," they possess a cry somewhat similar to the scream of the Flicker; another that could be likened to the "chip" of the Song Sparrow, a harsher, grating cry somewhat like that of the Purple Martin, as well as a twittering calling cry, heard when the parent has food for the young.

Circleville, Ohio.

DESCRIPTION OF ANOTHER NEW SUBSPECIES OF LANIUS LUDOVICIANUS.

BY HARRY C. OBERHOLSER.

Specimens of a shrike representing the breeding form of *Lanius ludovicianus* in north central Lower California seem not referable to any described subspecies. A small series in the United States National Museum has been supplemented by birds collected by Mr. A. W. Anthony and loaned by the Carnegie Museum at Pittsburgh, through Mr. W. E. C. Todd. The writer is also indebted to Mr. A. B. Howell for specimens of *Lanius ludovicianus anthonyi* and *Lanius ludovicianus mearnsi*. Since all the forms of *Lanius ludovicianus* from western North America bear the names of ornithologists, it seems appropriate to provide a similar designation for the present new race, and it accordingly gives me pleasure to dedicate it to Dr. Joseph Grinnell, who has done so much to promote the cause of ornithology on the Pacific Coast.

Lanius ludovicianus grinnelli, subsp. nov.

Grinnell Shrike.

Chars. subsp.—Similar to *Lanius ludovicianus mearnsi*, from San Clemente Island, California, but bill longer; up-